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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,858	09/28/2001	Margaret K. Hostetter	P07274US02/BAS	2374

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EXAMINER
DEVI, SARVAMANGALA J N

ART UNIT	PAPER NUMBER
1645	4

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/964,858	Hostetter et al.
Examiner	**Art Unit**
S. Devi, Ph.D.	1645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 29, 2003* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above, claim(s) *5-8, 16, 18-22, and 24-30* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4, 9-15, 17, and 23* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *8.*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: Sequence search reports (2).

SEQ ID NO 1.

RESULT 1
AAW99462
ID AAW99462 standard; Protein; 1664 AA.
XX
AC AAW99462;
XX
DT 08-JUN-1999 (first entry)
XX
DE C.albicans alpha-INT1p protein.
XX
KW Integrin-like motif; vaccine; immune response; antibody; inhibition;
KW adhesion; endothelial cell; pathogenesis; infection; probe.
XX
OS Candida albicans.
XX
PN US5886151-A.
XX
PD 23-MAR-1999.
XX
PF 03-MAY-1996; 96US-0642846.
XX
PR 03-MAY-1996; 96US-0642846.
XX
PA (MINU) UNIV MINNESOTA.
XX
PI Bendel CM, Gale CA, Hostetter MK, Kendrick K, Tao NJ;
XX
DR WPI; 1999-242618/20.
DR N-PSDB; AAX25885.
XX
PT New isolated Candida albicans protein with integrin-like motifs
XX
PS Examples; Column 13-14; 21pp; English.

XX
CC This sequence represents the Candida albicans alpha-INT1 protein which
CC contains integrin-like motifs. The protein was used to derive peptides
CC AAW99456-W99461 used for producing vaccines for stimulating an immune
CC response. The antibodies can inhibit the adhesion of C.albicans to
CC cells, particularly endothelial cells. This blocking activity of the
CC adhesion to cells can reduce or prevent subsequent events in the
CC pathogenesis of invasive candidal infection.
XX
SQ Sequence 1664 AA;

Query Match 100.0%; Score 1386; DB 20; Length 1664;
Best Local Similarity 100.0%; Pred. No. 5e-107;
Matches 263; Conservative 0; Mismatches 0; Indels 0; Gaps

```
Qy       1 MNSTPSKLLPIDKHSHLQLQPQSSSASIFNSPTKPLNFPRTNSKPSLDPNSSSDTYTSEQ 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 MNSTPSKLLPIDKHSHLQLQPQSSSASIFNSPTKPLNFPRTNSKPSLDPNSSSDTYTSEQ 60

Qy      61 DQEKGKEEKKDTAFQTSFDRNFDLDNSIDIQQTIQHQQQQPQQQQQLSQTDNNLIDEFSF 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 DQEKGKEEKKDTAFQTSFDRNFDLDNSIDIQQTIQHQQQQPQQQQQLSQTDNNLIDEFSF 120

Qy     121 QTPMTSTLDLTKQNPTVDKVNENHAPTYINTSPNKSIMKKATPKASPKKVAFTVTNPEIH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 QTPMTSTLDLTKQNPTVDKVNENHAPTYINTSPNKSIMKKATPKASPKKVAFTVTNPEIH 180

Qy     181 HYPDNRVEEEDQSQQKEDSVEPPLIQHQWKDPSQFNYSDEDTNASVPPTPPLHTTKPTFA 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 HYPDNRVEEEDQSQQKEDSVEPPLIQHQWKDPSQFNYSDEDTNASVPPTPPLHTTKPTFA 240

Qy     241 QLLNKNNEVNSEPEALTDMKLKR 263
           |||||||||||||||||||||||
Db     241 QLLNKNNEVNSEPEALTDMKLKR 263
```

Peptide of SEQ ID NO. 1.

RESULT 4
AAW99456
ID AAW99456 standard; protein; 236 AA.
XX
AC AAW99456;
XX
DT 08-JUN-1999 (first entry)
XX
DE Amino acids 218-453 of C.albicans integrin-like protein 1.
XX
KW Integrin-like motif; vaccine; immune response; antibody; inhibition;
KW adhesion; endothelial cell; pathogenesis; infection.
XX
OS Candida albicans.
XX
PN US5886151-A.
XX
PD 23-MAR-1999.
XX
PF 03-MAY-1996; 96US-0642846.
XX
PR 03-MAY-1996; 96US-0642846.
XX
PA (MINU) UNIV MINNESOTA.
XX
PI Bendel CM, Gale CA, Hostetter MK, Kendrick K, Tao NJ;
XX
DR WPI; 1999-242618/20.
XX
PT New isolated Candida albicans protein with integrin-like motifs
XX
PS Claim 1; Column 35; 21pp; English.
XX
CC Peptides AAW99456-W99461 are derived from a Candida albicans protein
CC with integrin-like motifs, alpha-INP1. This sequence represents amino
CC acids 218-453 of alpha-INP1. The peptides can be used for producing
CC vaccines for stimulating an immune response. The antibodies can inhibit
CC the adhesion of C.albicans to cells, particularly endothelial cells.
CC This blocking activity of the adhesion to cells can reduce or prevent
CC subsequent events in the pathogenesis of invasive candidal infection.
XX
SQ Sequence 236 AA;

  Query Match   17.4%; Score 241; DB 20; Length 236;
  Best Local Similarity   100.0%; Pred. No. 2.8e-12;
  Matches   46; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   218 SDEDTNASVPPTPPLHTTKPTFAQLLNKNNEVNSEPEALTDMKLKR 263
          |||||||||||||||||||||||||||||||||||||||||||||||
Db   1 SDEDTNASVPPTPPLHTTKPTFAQLLNKNNEVNSEPEALTDMKLKR 46

DETAILED ACTION

Preliminary Amendments

1) Acknowledgment is made of Applicants' preliminary amendments filed 01/11/02 (paper no. 6) and 01/29/03 (paper no. 10). With these, Applicants have amended the specification or the claims.

Election

2) Acknowledgment is made of Applicants' election filed 01/29/023 (paper no.10) of invention 1, claims 2, 13 and 23, in response to the restriction requirement mailed 01/03/03 (paper no. 9). Because Applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (M.P.E.P § 818.03(a)).

Applicants contend that they have amended claims 1 and 2 to clarify that the antibody binds to the Int1p propeptide which has amino acids 1-263 of the Int1p protein of SEQ ID NO: 1. Applicants request that claims 1, 3, 4 and 9-11 of invention group 5 be joined with invention group 1. Because of the amendments made to claims 1 and 2, claims 2, 13 and 23 as well as claims 1, 3, 4 and 9-11 and the linking claims 12, 14, 15 and 17, have been joined and examined to the extent they encompass the amino acids 1-263 of SEQ ID NO: 1.

Status of Claims

3) Claims 1 and 2 have been amended via the amendment filed 01/29/03.

Claims 1-30 are pending in this application.

Claims 5-8, 16, 18-22 and 24-30 have been withdrawn from consideration as being directed to a non-elected invention. See 37 C.F.R 1.142(b) and M.P.E.P § 821.03.

Claims 1-4, 9-15, 17 and 23, to the extent they encompass an antibody that binds to the Int1p propeptide which has amino acids 1-263 of the Int1p protein of SEQ ID NO: 1, are under examination.

Sequence Listing

4) Acknowledgment is made of Applicants' Sequence Listing filed in the instant application has been entered on 01/31/02.

Information Disclosure Statement

5) Acknowledgment is made of Applicants' information disclosure statement filed 02/21/02

(paper no. 8). The information referred to therein has been considered and a signed copy is attached to this Office Action (paper no. 11).

Drawings

6) The formal drawings filed 01/11/02 (paper no. 4) are not objected to by the Draftsperson under 37 C.F.R 1.84 or 1.152 and as such, the drawings have been approved as formal drawings.

Priority

7) This application claims domestic priority to the provisional application, SN 60/237,082, filed 09/28/2000.

Abstract

8) The abstract of the instant application is objected to for the use of the legal phraseology "said" which should be avoided. Correction is required. See M.P.E.P 608.01(b).

Specification - Informalities

9) The specification is objected to for the following reasons:

(a) The amino acid sequences recited in Figures 3, 4 and 17 and the amino acid sequence recited in line 8 of page 11; and lines 19, 20 and 25 of page 27 contain more than four amino acids, yet are not identified, either in the Figures or in Figure descriptions, by SEQ ID NOs as required under 37 C.F.R 1.821 through 1.825. Any sequences recited in the instant specification which are encompassed by the definitions for nucleotide and/or amino acid sequences as set forth in 37 C.F.R. 1.821(a)(1) and (a)(2) must comply with the requirements of 37 C.F.R 1.821 through 1.825. Note that branched sequences are specifically excluded from this definition.

APPLICANT MUST COMPLY WITH THE SEQUENCE RULES WITHIN THE SAME TIME PERIOD AS IS GIVEN FOR RESPONSE TO THIS ACTION, 37 C.F.R 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 C.F.R 1.821(g).

(b) Under 'Brief Description of the Drawing Figures' on pages 5 and 6 of the specification, the recitation "Figure 12 illustrates" and "Figure 13 is" should be replaced with -- Figures 12A and 12B illustrate-- and Figures 3A, 3B and 3C are-- respectively. All references to these Figures in the specification should be amended to reflect these change in numbering. The two panels of Figure 12 and the three panels of Figure 13 in the drawings should be labeled or identified

as A and B, and A, B and C respectively.

Rejection(s) under Double Patenting

10) The non-statutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970) and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R 1.321(c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R 3.73(b).

11) Claims 1-4, 12-15, 17 and 23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 28, 29, 40-42, 45, 46 and 48 of the co-pending application, SN 09/978,343.

An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). See e.g., *In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998)*; *In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993)*; *In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir, 1985)*.

Claims 28, 29, 40-42, 45, 46 and 48 the co-pending application, SN 09/978,343 recite or encompass an isolated antibody to Int1p protein of *Candida albicans* having the SEQ ID NO: 2, which is 100% structurally identical to the SEQ ID NO: 1 recited in the instant claims, and therefore is viewed as an antibody which can bind to the instantly recited propeptide.

Rejection(s) under 35 U.S.C. § 112, First Paragraph

12) Claims 9 and 10 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for a pharmaceutical composition comprising an isolated antibody that binds specifically to the *Candida albicans* propeptide having the amino acids 1-263 of the Int1p protein of the amino acid sequence SEQ ID NO: 1, does not reasonably provide enablement for a pharmaceutical composition comprising the antibody which is capable of treating or preventing an infection caused by any microorganism, including *Candida albicans* and *Saccharomyces cerevisiae*. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with the claims.

Instant claims are evaluated based on *Wands* factors. Many of the factors regarding undue experimentation have been summarized *In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Circ. 1988) as follows:

- The quantity of experimentation necessary (time and expense);
- The amount of direction or guidance presented;
- The presence or absence of working examples of the invention;
- The nature of the invention;
- The state of the art;
- The relative skill of those In the art;
- The predictability or unpredictability of the art; and
- The breadth of the claims.

Instant claims are drawn to a pharmaceutical composition comprising an isolated antibody that can bind to the propeptide, peptide263, of the *Candida albicans* Int1p protein of the amino acid sequence, SEQ ID NO: 1, 'for treating or preventing an infection from a microorganism expressing the Int1p protein'. The specification describes an isolated antibody that can bind to the propeptide, peptide263, of the *Candida albicans* Int1p protein of the amino acid sequence, SEQ ID NO: 1, but does not show that the antibody indeed is capable of 'treating or preventing an infection' from any microorganism, including *Candida albicans* and *Saccharomyces cerevisiae* expressing the Int1p protein. It is noted that predictability or unpredictability is one of the *Wands* factors for enablement. The ability of an antibody specific to a microbial antigen to prevent or treat a homologous or heterologous infection is not predictable, absent a concrete showing. A mere binding of an antibody to an antigen does not necessarily indicate its protective, prophylactic or therapeutic ability. The

instant specification fails to teach that the instantly claimed antibody is capable of preventing, treating, protecting or reducing the mortality and morbidity of the disease caused by any microorganism expressing the Int1p protein, including *Candida albicans* and *Saccharomyces cerevisiae*. The term 'treating or preventing an infection' requires that the claimed element In the composition is protective against a specific pathogen or a disease. It is well known In the art that, of a myriad of polypeptides that may be produced by a bacterial or microbial pathogen, not all polypeptides elicit a pathogen-specific antibodies that is protective against the homologous or heterologous pathogen. The selection of an immunogenic component that induces protective antibodies from a myriad of immunogenic components present on the microbial surface, or produced by a microbial pathogen, and identification of a specific region In that immunogenic component to which a protective antibody is produced, cannot be accomplished with a predictable precision, without undue experimentation. The art of vaccines recognizes the unpredictability associated with whether or not an antigen or immunogenic component derived from a microbial pathogen is indeed immunoprotective. For instance, Ellis RW [*Vaccines*, (Eds) Plotkin *et al.*, W.B. Saunders Company, Philadelphia, Chapter 29, 568-575, 1988, see page 571, second full paragraph] disclosed this problem In the teaching that the key to the problem of vaccine development "is the identification of that protein component of a ..... microbial pathogen that itself can elicit the production of protective antibodies ..... and thus protect the host against attack by the pathogen". In the instant case, the specification fails to teach or show that the propeptide, peptide263, of the isolated *Candida albicans* Int1p polypeptide of the amino acid sequence, SEQ ID NO: 1, alone or In combination with other antigens, does In fact induce an antibody that is therapeutic or prophylactic (i.e., protective) against an infection caused by the specific species, *Candida albicans*, let alone any other microorganism including *Saccharomyces cerevisiae*. There is no showing within the specification that an isolated antibody which binds to the 1 to 263 propeptide portion of *Candida albicans* Int1p polypeptide of the amino acid sequence, SEQ ID NO: 1 is therapeutically or prophylactically effective against a homologous or a heterologous infection caused by a microorganism expressing the Int1p protein. Absent a concrete showing that the claimed product is effective In treating or preventing a *Candida albicans*, a *Saccharomyces cerevisiae* or any microbial infection, the instant claims are considered non-enabled. The specification lacks adequate guidance and disclosure that would limit the

experimentation from being undue. Given the art-recognized unpredictability associated with the structure-function relationship of a polypeptide to which the antibody is directed to, one of skill In the art would look into the specification for specific teaching and guidance, which In the instant case is lacking. Therefore, undue experimentation would have been required by one of skill In the art at the time of the effective filing date of the instant application to reproducibly practice the invention as claimed due to the lack of specific and adequate disclosure, the lack of working examples, the art-demonstrated unpredictability, the quantity of experimentation necessary, and the breadth of claims.

Rejection(s) under 35 U.S.C. § 112, Second Paragraph

13) Claims 2-4, 9-11, 13-15, 17 and 23 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite, for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

(a) For proper antecedence, it is suggested that In line 1 of claims 2, 3, 13 and 14, it is suggested that Applicants replace the recitation "An isolated antibody according to claim .." with --The isolated antibody according to claim ..--.

(b) For proper antecedence, it is suggested that In line 1 of claims 10, it is suggested that Applicants replace the recitation "A pharmaceutical composition according to claim 9" with --The pharmaceutical composition according to claim 9--.

(c) Claim 2 is vague In the recitation 'protein of SEQ ID NO: 1' without clearly identifying the SEQ ID NO: 1 as an amino acid sequence. For the purpose of clarity and for particularly pointing out the subject matter, it is suggested that Applicants replace the recitation with --protein of the amino acid sequence of SEQ ID NO: 1--.

(d) For proper antecedence, it is suggested that In line 1 of claims 4 and 11, it is suggested that Applicants replace the recitation "an antibody according to claim 1" with --the antibody according to claim 1--.

(e) For proper antecedence, it is suggested that In line 3 of claim 9, it is suggested that Applicants replace the recitation "an isolated antibody according to claim 1" with --the isolated antibody according to claim 1--.

(f) For proper antecedence, it is suggested that In line 1 of claims 15 and 17, it is suggested that Applicants replace the recitation "an antibody according to claim 12" with --the

antibody according to claim 12--.

(g) Claim 23 improperly depends from a non-elected claim, i.e., claim 18.

Rejection(s) under 35 U.S.C. § 102

14) The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made In this Office action:

> A person shall be entitled to a patent unless --
> **(a)** the invention was known or used by others In this country, or patented or described In a printed publication In this or a foreign country, before the invention thereof by the applicant for a patent.
> **(b)** the invention was patented or described In a printed publication In this or a foreign country or In public use or on sale In this country, more than one year prior to the date of application for patent In the United States.

15) Claims 1-4 and 12-15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151).

It is noted that claims 1 and 12 do not define the propeptide or the protein by its structure or a SEQ ID number.

Hostetter *et al.* ('151) disclosed antibodies to the Int1p protein of *Candida albicans* and to fragments or peptides thereof. The Int1p protein of *Candida albicans* has the amino acid sequence of SEQ ID NO: 2, and a peptide thereof comprising 236 amino acids near the amino terminus of the Int1p protein, has the amino acid sequence of SEQ ID NO: 3. The prior art amino acid sequence of SEQ ID NO: 2 comprises amino acid residues 1-263 of the instantly recited SEQ ID NO: 1 and the prior art amino acid sequence of SEQ ID NO: 3 comprises the amino acid residues 218 to 263 of the instantly recited SEQ ID NO: 1 (see the attached sequence search reports). The antibodies are able to block *Candida albicans* adhesion to epithelial cells by 30-50%. See abstract; Tables 2 and 3; 'Summary of the Invention' In column 2; first paragraph In column 13; and last two paragraphs In column 4. Hostetter's polyclonal and monoclonal antibodies to Int1p peptides of *Candida albicans* also recognize the Int1p surface expressed In *Saccharomyces cerevisiae* (see lines 28-30 In column 5). Since the Int1p propeptide or the peptide region recited In the claims is undefined structurally or by a SEQ ID number, absent evidence to the contrary, Hostetter's antibody is viewed as the same as the claimed antibody which can reasonably be expected to bind to the instantly recited propeptide. Because of 100% sequence match between the prior art peptide from amino acid residues 1 to 46 of SEQ ID NO: 3 and amino acid residues 218 to 263 of the instantly recited SEQ ID NO: 1, one would reasonably expect the prior art antibody to bind to the instantly recited propeptide. Since the

prior art antibody is structurally the same as the antibody recited In the instant claims, it is expected to have the capacity for preventing the cleaving of the propeptide. The property of the ability to prevent the cleaving of the propeptide as recited by the Applicants is inherent to the antibody of Hostetter *et al.* ('151).

Claims 1-4 and 12-15 are anticipated by Hostetter *et al.* ('151).

16) Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by White *et al.* (*J. Cell Biochem.* Suppl. 0, page 173, 1990), or Hostetter *et al.* (*J. Cell Biochem.* Suppl. 16F: page 149, x110, 1991).

It is noted that claim 1 does not define the propeptide or the protein by its structure or a SEQ ID number.

White *et al.* taught antibodies to a peptide from the cytoplasmic domain of the vertebrate integrin beta1 subunit that reacts with a membrane-associated protein from *Candida albicans* (see abstract).

Hostetter *et al.* (1991) taught a monoclonal antibody that binds to an integrin analog protein of *Candida albicans* (see abstract).

Since the Int1p propeptide recited In the claims is undefined structurally and not identified by a SEQ ID number, absent evidence to the contrary, Hostetter's antibody is viewed as the same as the claimed antibody which can reasonably be expected to bind to the instantly recited propeptide. The prior art peptide or integrin analog protein is viewed as the same as the instantly recited peptide and the Int1p protein.

Claim 1 is anticipated by White *et al.* or Hostetter *et al.* (1991).

Rejection(s) under 35 U.S.C. 103

17) The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth In this Office action:

> **(a)** A patent may not be obtained though the invention is not identically disclosed or described as set forth In section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person. having ordinary skill In the art to which said subject matter pertains. Patentability shall not be negatived by the manner In which the invention was made.

The factual inquiries set forth In *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized

as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill In the pertinent art.
4. Considering objective evidence present In the application indicating obviousness or unobviousness.

18) Claims 1, 9 and 10 are rejected under 35 U.S.C § 103(a) as being unpatentable over Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151).

The recitation: "for treating or preventing an infection from a microorganism expressing the Int1p protein", has not been given patentable weight because it occurs In the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

The teachings of Hostetter *et al.* are explained above which do not disclose the presence of a pharmaceutical carrier, vehicle or diluent along with their antibody.

However, adding an art-known pharmaceutical carrier, vehicle or diluent, to an art-disclosed antibody was well known and routinely practiced In the art at the time of the instant invention, for the purpose of providing an antibody composition for diagnostic or *In vivo* use. Therefore, it would have been *prima facie* obvious to one of skill In the art at the time the invention was made to add an art-known diluent, such as saline or PBS, to Hostetter's ('151) antibody to produce the instant invention, with a reasonable expectation of success. One of skill In the art would have been motivated to produce the instant invention for the expected benefit of presenting Hostetter's antibody as a composition for diagnostic or *In vivo* use, or for commercializing Hostetter's antibody as a composition.

Claims 1, 9 and 10 are *prima facie* obvious over the prior art of record.

19) Claims 1, 11, 12 and 17 are rejected under 35 U.S.C § 103(a) as being unpatentable over Hostetter *et al.* (US 5,886,151 - Applicants' IDS) ('151).

The teachings of Hostetter *et al.* are explained above which do not expressly mention the

term 'diagnostic kit' In connection with the antibody and the use of a detection means.

However, methods of assembling a diagnostic kit using one or more art-disclosed antibody or a detection reagent were well known and routinely practiced In the art. Therefore, it would have been *prima facie* obvious to one of ordinary skill In the art at the time the invention was made to produce such a diagnostic kit for diagnostic purposes using the antibody of Hostetter *et al.* and an art-known detection reagent with a reasonable expectation of success. A skilled artisan would have been motivated to produce the instant invention for the expected benefit of making readily available Hostetter's antibody reagent, or for commercializing Hostetter's antibody for diagnostic use.

Claims 1, 11, 12 and 17 are *prima facie* obvious over the prior art of record.

Relevant Prior Art

20) The prior art made of record and not currently relied upon In any of the rejections is considered pertinent to Applicant's disclosure:

- Hostetter *et al.* (US 5,886,151) disclosed antibodies to the Int1p protein of *Candida albicans* and fragments or peptides thereof (see entire document).

Remarks

21) Claims 1-4, 9-15, 17 and 23 stand rejected.

22) Papers related to this application may be submitted to Group 1600, AU 1645 by facsimile transmission. Papers should be transmitted via the PTO Fax Center located In Crystal Mall 1. The transmission of such papers by facsimile must conform with the notice published In the Official Gazette, 1096 OG 30, November 15, 1989. The CM1 facsimile center's telephone number is (703) 308-4242, which is able to receive transmissions 24 hours a day and 7 days a week. The RightFax number for submission of before-final amendments is (703) 872-9306. The RightFax number for submission of after-final amendments is (703) 872-9307.

23) Any inquiry concerning this communication or earlier communications from the Examiner should be directed to S. Devi, Ph.D., whose telephone number is (703) 308-9347. A message may be left on the Examiner's voice mail system. The Examiner can normally be reached on Monday to Friday from 7.15 a.m. to 4.15 p.m. except one day each bi-week, which would be disclosed on the Examiner's voice mail system

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor,

Lynette Smith, can be reached on (703) 308-3909.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

April, 2003

S. DEVI, PH.D.
PRIMARY EXAMINER